

L Number	Hits	Search Text	DB	Time stamp
4	406	parathyroid adj1 hormone and sodium adj1 chloride and mannitol	USPAT; US-PGPUB	2003/03/14 10:48
7	372	parathyroid adj1 hormone and sodium adj1 chloride and mannitol and composition	USPAT; US-PGPUB	2003/03/14 10:30
10	299	parathyroid adj1 hormone and sodium adj1 chloride and mannitol and formulation	USPAT; US-PGPUB	2003/03/14 10:32
13	39	parathyroid adj1 hormone and sodium adj1 chloride and mannitol and citrate adj1 buffer	USPAT; US-PGPUB	2003/03/14 11:12
16	3	2234724.pn.	USPAT; US-PGPUB; EPO; DERWENT	2003/03/14 10:38
39	1	parathyroid adj1 hormone near mannitol	USPAT; US-PGPUB	2003/03/14 11:14
42	9	parathyroid adj1 hormone same mannitol	USPAT; US-PGPUB	2003/03/14 11:17
45	0	(martin near Billger.in.) or (mikael near Brulls.in.)	USPAT; US-PGPUB	2003/03/14 11:19

	U	1	Document ID	Issue Date	Pages	Title	Current OR
1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	US 20020061838 A1	20020523	19	Peptide pharmaceutical formulations	514/2
2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	US 20020107200 A1	20020808		Stabilized teriparatide solutions	514/12
3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	US 20020117170 A1	20020829	13	Compositions and methods for the pulmonary delivery of aerosolized macromolecules	128/200.14
4	<input type="checkbox"/>	<input type="checkbox"/>	US 20030044460 A1	20030306	18	Spray drying process control of drying kinetics	424/459
5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	US 4995385 A	19910226		Inhaler with regular complete emptying of the capsule	128/203.21
6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	US 5152284 A	19921006		Disposable inhaler with pre-pierced capsule	128/203.21
7	<input type="checkbox"/>	<input type="checkbox"/>	US 5496801 A	19960305	8	Parathyroid hormone formulation	514/12
8	<input type="checkbox"/>	<input type="checkbox"/>	US 5563122 A	19961008	5	Stabilized parathyroid hormone composition	514/12
9	<input type="checkbox"/>	<input type="checkbox"/>	US 5849322 A	19981215	20	Compositions and methods for buccal delivery of pharmaceutical agents	424/435

	Current XRef	Retrieval Classif	Inventor	S	C	P	2	3	4	5
1			Holmquist, Barton et al.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	530/399		Chang, Chin-Ming et al.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3			Platz, Robert M. et al.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4			Bennett, David B. et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	128/203.15 ; 128/203.23		Valentini, Luigi et al.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	128/203.12 ; 128/203.15 ; 128/203.23		Valentini, Luigi et al.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	514/2; 514/970		Holthuis, Josephus J. M. et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	514/21; 514/769; 514/777; 514/970; 530/344		Endo, Ken et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	424/434; 514/953		Ebert, Charles D. et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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1	US 20020061838	<input type="checkbox"/>
2		<input type="checkbox"/>
3	US 20020117170	<input type="checkbox"/>
4	US 20030044460	<input type="checkbox"/>
5		<input type="checkbox"/>
6		<input type="checkbox"/>
7	US 5496801	<input type="checkbox"/>
8	US 5563122	<input type="checkbox"/>
9	US 5849322	<input type="checkbox"/>



US 20020061838A1

(19) **United States**(12) **Patent Application Publication**  
**Holmquist et al.**(10) **Pub. No.: US 2002/0061838 A1**(43) **Pub. Date: May 23, 2002**(54) **PEPTIDE PHARMACEUTICAL  
FORMULATIONS**of provisional application No. 60/205,262, filed on  
May 19, 2000.(76) **Inventors: Barton Holmquist, Lincoln, NE (US);  
Daniel C. Dormady, Omaha, NE (US)****Publication Classification**(51) **Int. Cl.<sup>7</sup> ..... A61K 38/18; A61K 38/29**(52) **U.S. Cl. .... 514/2****Correspondence Address:****Beth A. Burrous****FOLEY & LARDNER****Suite 500****3000 K Street, N.W.****Washington, DC 20007-5109 (US)**(57) **ABSTRACT**(21) **Appl. No.: 09/858,880**(22) **Filed: May 17, 2001****Related U.S. Application Data**(63) **Non-provisional of provisional application No.  
60/205,377, filed on May 17, 2000. Non-provisional**

A pharmaceutical composition for administration to a mammal is disclosed. The composition includes a therapeutically effective amount of a peptide, such as a GLP-1 molecule, a PTH molecule, or a GRF molecule. The composition further includes a buffer including a weak acid having an acid dissociation constant value of greater than about  $1 \times 10^{-5}$ , such as acetic acid. The composition also includes an excipient for making the composition generally isotonic, such as D-mannitol.